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Indian Standard

**CODE FOR HYGIENIC CONDITIONS FOR
LARGE SCALE BISCUIT MANUFACTURING
UNITS AND BAKERY UNITS**

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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CODE FOR HYGIENIC CONDITIONS FOR LARGE SCALE BISCUIT MANUFACTURING UNITS AND BAKERY UNITS

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Directorate of Marketing & Inspection (Ministry of
Food, Agriculture, Community Development &
Co-operation), Nagpur

DEPUTY SENIOR MARKETING
OFFICER (FRUIT PRO-
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AMENDMENT NO. 1 DECEMBER 1983

TO

IS:5059-1969 CODE FOR HYGIENIC CONDITIONS
FOR LARGE SCALE BISCUIT MANUFACTURING UNITS
AND BAKERY UNITS

Alteration

(Page 6, clause 8.3) - Substitute the following
for the existing clause:

'8.3 All employees shall be inoculated against typhoid and paratyphoid A diseases on their first appointment and thereafter, once in every five years. In case of epidemic, all workers shall be inoculated. A record shall be maintained.'

Addendum

(Page 5, clause 4.10) - Add the following new
clause after 4.10:

'4.11 Bakery products returned from market shall not be recycled in the processing zone of bakery units.'

(AFDC 36)

AMENDMENT NO. 2 MAY 1993
TO
IS 5059 : 1969 CODE FOR HYGIENIC CONDITIONS
FOR LARGE SCALE BISCUIT MANUFACTURING
UNITS AND BAKERY UNITS

(*First cover page, pages 1 and 3, Title*) — Substitute 'Code for hygienic conditions for biscuit manufacturing units and bakery units' for 'Code for hygienic conditions for large scale biscuit manufacturing units and bakery units'.

(*Page 6, clause 6.2*) — Add 'and sanitizing agents' after 'detergents'.

(FAD 45)

Reprography Unit, BIS, New Delhi, India

Indian Standard

CODE FOR HYGIENIC CONDITIONS FOR LARGE SCALE BISCUIT MANUFACTURING UNITS AND BAKERY UNITS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 25 April 1969, after the draft finalized by the Food Hygiene, Sampling and Analysis Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Consumers do not have the available knowledge or means of determining the hygienic quality of the food they purchase. For this, they rely on the hygienic standards of various industries that prepare and handle foods. This code has been prepared keeping in view that unless the factory producing the food is governed by a strict hygienic code in respect of layout, plant and personnel, the quality of the food produced cannot be considered as safe.

0.3 This code is an adjunct to IS:2491-1963*, and it covers requirements specific to the large scale biscuit manufacturing units and bakery units.

0.4 This code is subject to the provisions in the Factories Act, 1948 and the Prevention of Food Adulteration Act, 1954, and the Rules framed thereunder, amended up to date.

0.5 The basic principles of hygiene underlining the technical advice in this code should be applied with appropriate modifications to all biscuit manufacturing units and bakery units.

1. SCOPE

1.1 This standard prescribes the hygienic conditions required for establishing and maintaining large scale biscuit manufacturing units and bakery units.

*Code for sanitary conditions for food processing units.

2. SITE

2.1 A biscuit manufacturing unit or a bakery unit shall preferably be situated in an open, clean and healthful locality.

2.2 The ground of the premises surrounding the factory buildings should be clean and preferably paved or turfed to lay the dust.

3. BUILDING

3.1 Structure—The building shall be of a permanent nature and shall be of brick and lime plaster, cement, concrete or any other material which ensures cleanliness.

3.2 Construction of the building shall be such that it shall be rodentproof, flyproof and birdproof. The building and yard, with fittings and equipment should be kept free from breeding places of flies and other insects, by eliminating cracks and crevices, as well as by routine and thorough cleaning.

3.3 Ventilation and Lighting—The unit shall be adequately lighted and ventilated, keeping in mind the number of workers, their hours of work and nature of operation. Ventilation and lighting shall be also in accordance with the Factories Act, 1948, amended up to date.

3.4 Floor—The floor shall be washable, with sufficient drainage facility, and it shall be impervious to water and not affected by weak acids, alkalies or steam.

3.5 Internal Wall—The internal wall shall be smooth; it should be tiled or cement plastered or made of any other impervious material, where wash basins/sinks are installed, the walls shall be tiled or made impervious to water up to a desired height (at least up to the height of the wash basins/sinks) from the floor to safeguard the wall from water seepage.

3.6 Ceilings—The ceilings shall be kept clean.

3.7 Maintenance and Repairs—The building shall be maintained in a proper state of repair and cleanliness. Whenever required, it shall be lime-washed, painted, disinfected or deodorized.

3.7.1 There shall be no cobwebs in any part of the unit.

3.8 Preparation and filling tables shall be of wooden tops or covered with aluminium or stainless steel sheets or otherwise made impervious to water as far as practicable. All surfaces coming into contact with the food shall be free from pits, crevices and loose scale and shall be non-absorbent.

3.9 All internal joinery work should be of simple design for easy cleaning and for minimizing flour dust deposit. In all rooms woodwork surrounding doors, windows and other openings should be fixed tight to the internal wall surfaces so as to avoid open joints which may harbour pests.

3.10 Store Rooms—The store rooms for raw and packing materials should be free from dampness and should be rodentproof.

3.11 Wherever possible a separate room for storing machinery, equipment, spare parts, pesticides, etc, shall be provided in a location convenient to various preparation and processing areas.

3.12 Proper places shall be provided for storage of brooms, brushes, buckets and other cleaning gear.

4. FACTORY AND PROCESSING HYGIENE

4.1 Waste and rubbish shall be collected in covered receptacles and shall not be allowed to lie about on the floor.

4.2 Adequate measures shall be taken to prevent growth of mould on equipment and internal structures of processing and storage rooms.

4.2.1 Adequate steps shall be taken to prevent infestation of cockroaches and other household pests.

4.3 When pesticides and/or disinfectants are used, care shall be exercised to prevent contamination of equipment, raw materials and packing materials.

4.4 Floors and drains shall be kept clean. In the processing room, drains shall be provided with detachable covers.

4.5 Sinks and troughs used for washing ingredients and utensils shall not be used for washing of hands.

4.6 No lavatory, sink, cesspool, or garbage shall be so situated or maintained that odours or fumes therefrom pervade any room where the product or raw materials are prepared or stored.

4.7 The factory effluents shall be disposed of in a hygienic manner and shall not be let off on road on adjacent fields.

4.8 Window glass and light fittings shall be generally kept clean.

4.9 Container Cleanliness—It shall be ensured that the containers are clean. The containers shall not be stacked in a manner which allows the contamination of the product.

4.10 Domestic animals shall not be allowed in any part of the unit.

5. INSTALLATION OF EQUIPMENT

5.1 All equipment shall be installed on a foundation of durable, easily cleanable material.

5.2 Equipment shall be placed away from the walls with a view to providing facilities for inspection and cleaning.

5.3 Installation of pipes shall be such as to facilitate easy cleaning and maintenance.

6. EQUIPMENT AND CONTAINER CLEANLINESS

6.1 All electrical connections, such as switch boxes, control boxes, conduit cables shall be installed in such a way as to facilitate proper cleaning.

6.2 All equipment coming into contact with raw materials or the product shall be kept clean. An ample supply of water, hose, brushes, detergents and other equipment necessary for the proper cleaning of machinery and equipment shall be available.

6.3 All processing systems shall be cleaned at the close of operation or at the termination of the continuous operation period.

7. WATER

7.1 There shall be an adequate supply of water. The water shall be of potable quality.

7.2 The equipment shall be so installed and used that back siphonage of liquid into the potable water lines is precluded.

7.3 Hot or cold water in ample supply shall be provided for plant clean-up needs where necessary.

7.4 The storage tanks for water should, unless completely sealed, be kept covered, examined regularly and cleaned out at least once every six months.

8. EMPLOYEE HYGIENE

8.1 Every person employed in the factory shall be medically examined before employment. Periodical medical examination of the employees shall be subsequently carried out to ensure that they are free from contagious, communicable diseases.

8.1.1 It shall be impressed on all employees that they should notify the medical officer, cases of vomiting, diarrhoea, typhoid, dysentery or any other notifiable disease occurring in their own homes and families.

8.2 Employees shall keep their finger nails short and clean and wash their hands with soap or detergent before commencing work and after each absence, specially after using sanitary conveniences. Towels used for drying hands should be clean.

8.3 All employees shall be inoculated and vaccinated against the enteric groups of diseases once a year and against smallpox once in two years. In case of an epidemic all workers shall be inoculated. A record shall be kept.

8.4 No worker shall be allowed to work without proper clothing.

8.5 Employees shall be provided with clean uniform or aprons or both and clean washable caps, where necessary.

8.5.1 The uniforms shall be not worn outside the plant but put on just before starting the work and changed when leaving.

8.6 Eating, spitting, nose cleaning or the use of tobacco in any form or chewing betel leaves shall be prohibited within the manufacturing, packing and storage area of the unit. Notice to this effect shall be prominently displayed.

8.7 Sufficient and suitable sanitary conveniences shall be provided, maintained and kept clean in every factory. The conveniences shall be properly lighted. Separate conveniences shall be provided for each sex. No convenience shall open directly into any work room in the factory.

8.8 Sufficient wash basins with adequate provision of soap and towels, latrines and urinals in the prescribed manner should be provided, conveniently situated and accessible to workers at all times while they are at the factory.

9. CLEANING CHART

9.1 A routine cleaning chart should be drawn up and implemented. It may be on the lines of Appendix A.

APPENDIX A

(Clause 9.1)

ROUTINE CLEANING CHART FOR PREMISES

EQUIPMENT OR AREA	ROUTINE TO FOLLOW	FREQUENCY OF CLEANING
Drains	Remove grease and clean	Frequently and regularly
Open drainage channels	Remove any surface grit and scrub grids and channels with hot water containing detergent with a sterili- zer	- do -
Dust bins	Wash out and invert to dry	- do -

EQUIPMENT OR AREA	ROUTINE TO FOLLOW	FREQUENCY OF CLEANING
<i>Stores:</i>		
i) Walls and shelves	Sweep and/or clean	At least once a week
ii) Floors	Sweep and/or vacuum clean Wash down with hot water containing detergent	Frequently and regularly Daily
iii) Utensils, supply vessels, and measures	Wash with hot water containing detergent, rinse and dry. If the utensils supply vessels and measures, are used for meat, cream, imitation cream or egg, the hot water should contain detergent with a sterilizer	At least once a day, more frequently if the process requires
Ventilation ducts and fans	Brush and clean outside surfaces of ducts and metal fittings	When cleaning the walls
Storage tanks (not completely sealed)	Drain tank, wash interior with hot water containing detergent. Rinse thoroughly and run off. When refilling, first run off sufficient water to dispose of any residues	At least once every six months
Brining tanks	Scrape, scrub and wash with hot water containing detergent. Rinse thoroughly	Before refilling
Blocking, forming and stamping machines	Dismantle, degrease and clean thoroughly	Frequently and regularly
Homogenisers	Dismantle, wash working parts in warm water and detergent. Rinse with sterilizer, rinse with clean water, reassemble	At the close of every working period
Cooking utensils	Clean thoroughly and scrub in water at 45°C or above, or immerse in warm water containing detergent with sterilizer. Scour, rinse and dry.	After every period of use

EQUIPMENT OR AREA	ROUTINE TO FOLLOW	FREQUENCY OF CLEANING
Conveyor belts	Clean off dropped material	Frequently and regularly during use
	Clean surface of rollers	At least once a day
Proving and baking tins	Clean thoroughly	Frequently and regularly
Proving trolleys	Wash with hot water containing detergent, rinse and dry	Frequently and regularly during use
Dough and pastry mixers	Remove spillage and extruded food	Frequently and regularly during use
	Clean thoroughly and wash with warm water containing detergent. Rinse with cold water and dry	At the close of every working period
Flavours, essences and colour containers	Clean the outside of containers	Each time they are used
Pastry boards and icing tables	Remove all traces of flour or sugar deposit. Immerse boards in boiling water and scrub, or scrub with warm water containing detergent with sterilizer	Regularly
Knives and similar equipment	Wash in water at 45°C or above or in warm water containing detergent with sterilizer. Rinse and dry	After use
Wooden trays	Scrub with the grain in warm water containing detergent. Rinse and dry	Frequently and regularly
Wiping materials and cloths	Keep in suitable chemical sterilizer between uses and boil after changing	Change several times a day

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones: 331 01 31, 331 13 75

Telegrams: Manaksanstha
(Common to all Offices)

Regional Offices:

Telephone

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg,
NEW DELHI 110002 { 331 01 31
331 13 75

*Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road,
Maniktola, CALCUTTA 700054 { 36 24 99

Northern : SCO 445-446, Sector 35-C,
CHANDIGARH 160036 { 2 18 43
3 16 41

Southern : C. I. T. Campus, MADRAS 600113 { 41 24 42
41 25 19
41 29 16

†Western : Manakalaya, E9 MIDC, Marol, Andheri (East),
BOMBAY 400093 { 6 32 92 95

Branch Offices:

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‡Peenya Industrial Area 1st Stage, Bangalore Tumkur Road
BANGALORE 560058 { 38 49 55
38 49 56

Gangotri Complex, 5th Floor, Bhadbhada Road, T. T. Nagar,
BHOPAL 462003 { 6 67 16

Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002 { 5 36 27

63/5, Ward No 29, R.G. Barua Road, 5th Byelane,
GUWAHATI 781003 { 3 31 77

5-8-56C L. N. Gupta Marg (Nampally Station Road),
HYDERABAD 500001 { 23 10 83

R14 Yudhister Marg, C Scheme, JAIPUR 302005 { 6 34 71
6 98 32

117/418 B Sarvodaya Nagar, KANPUR 208005 { 21 68 76
21 82 92

Patliputra Industrial Estate, PATNA 800013 { 6 23 05

T.C. No. 14/1421, University P.O., Palayam
TRIVANDRUM 695035 { 6 21 04
6 21 17

Inspection Offices (With Sale Point):

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Institution of Engineers (India) Building, 1332 Shivaji Nagar,
PUNE 411005 { 5 24 35

*Sales Office in Calcutta is at 5 Chowringhee Approach, P. O. Princep Street, Calcutta 700072 { 27 68 00

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Reprography Unit, BIS, New Delhi, India